

Remarks/Arguments

Applicants wish to thank the Examiner for the careful review of the claims, specification, and drawings.

Claims

Independent claims 1 is currently amended.

Claim 2 is canceled.

Dependent claims 7, 8, 15, 21, 26-30, 38-40, 44, 46, 50 and 54 are currently amended.

Claims 34-37 and 55-58 have been previously withdrawn.

Claims 4, 6, 18, 23-25, and 41-43 have been previously presented.

Claims 3, 5, 9-14, 22 and 45 have been previously canceled.

After entry of this amendment, claims 1, 4, 6-8, 15-21, 23-33, 38-44, and 46-54 are pending.

It is respectfully submitted that each and every feature recited in the pending claims are fully supported in the specification as filed.

No new subject matter has been added.

Rejections under 35 USC § 103

The Office Action argues that claims 1, 2, 4-7, 9-33, 38-39, 44, and 46-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shih et al. (U.S. 20030190870), hereinafter "*Shih*", in view of Han et al. (20030127049), hereinafter "*Han*", and in further view of Crevasse et al. (20020129393), hereinafter "*Crevasse*".

The Office Action argues that claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Shih*, *Han*, and *Crevasse* as applied to claim 2 above, and further in view of Suzuki et al. (US Patent 4,688,918), hereinafter "*Suzuki*".

The Office Action argues that claims 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Shih*, *Han*, and *Crevasse* as applied to claim 2 above, and further in view of Amai et al. (U.S. 7,063,094), hereinafter "*Amai*".

Claims 1, 2, 4-7, 9-33, 38-39, 44, and 46-54:

A rejection under 35 U.S.C. 103(a) requires that the combined references suggest the claimed combination (MPEP 706 and 2141 et seq.). Under the Graham test, three factors must be evaluated: the scope and content of the prior art; the differences between the prior art and the claimed invention; and the level or ordinary skill in the art (MPEP 706 and 2141 et seq.).

The Office Action argues that claims 1, 2, 4-7, 9-33, 38-39, 44, and 46-54 are rejected under 35 USC §103(a) as being unpatentable over *Shih* in view of *Han*, and in further view of *Crevasse* for various reasons.

Applicants have amended independent claim 1 to clarify and require additional features as followed:

1. (Currently amended) In a plasma processing system, a method of removing a set of particles including aluminum chloride from a set of structures including yttrium oxide, comprising the following steps in the sequence set forth:

exposing said set of structures to a first solution including an oxidizer for a first period; thereafter

removing said set of structures from said first solution; thereafter

exposing said set of structures to a second solution including a ketone reagent for a second period; thereafter

removing said set of structures from said second solution; thereafter

rinsing said set of structures with de-ionized water and subsequently drying said set of structures with a filtered gas; thereafter

mechanically rubbing a surface of said set of structures with a third solution including a first set of acids for a third period, ~~said third period being about 1 minute; and; thereafter~~

rinsing said set of structures with said de-ionized water and subsequently drying said set of structures with said ~~filtered gas~~ filter gas; thereafter

exposing said set of structures to a fourth solution including a second set of acids for a fourth period, said second set of acids being weaker than said first set of acids; and thereafter
exposing said set of structures to a fifth solution including a first set of alkalines for a fifth period.

The support for the feature, in the manner claimed, in amended independent claim 1 of “... exposing said set of structures to a fourth solution including a second set of acids for a fourth period, said second set of acids being weaker than said first set of acids;” may be found in the specification, as filed, at least in paragraphs [0036 - 0049] and FIG. 4.

In cleaning a set of particles including aluminum chloride from a set of structures including yttrium oxide using a strong inorganic acid solution and then a weaker acid solution, **the sequence of steps in the manner claimed (e.g., strong acid dip then weak acid dip) in independent claim 1 is critical** (bold for emphasis). This criticality is reflected in the “**thereafter**” language amended in the claim and is supported by the time sequencing language in the discussion of Fig. 4 and in the sequencing of steps as seen in Fig. 4.

Applicants respectfully submit that *Shih, Han, and/or Crevasse*, taken alone or in combination, does not disclose or suggest the use of the second set of acids that is weaker than the first set of acids in the specific sequence as claimed in amended independent claim 1.

Additionally, amended independent claim 1 further requires the feature “... and thereafter exposing said set of structures to a fifth solution including a first set of alkalines for a fifth period.” The cleaning steps in amended independent claim 1, in the manner claimed, require the structure to be exposed to an alkaline dip in a specific sequence. Specifically, the alkaline dip follows a weak acid dip/DI rinse, which is itself performed after a strong acid dip/DI rinse as claimed in amended claim 1.

The support for the feature, in the manner claimed, in amended independent claim 1 of “... hereafter exposing said set of structures to a fifth solution including a first set of alkalines for a fifth period.” may be found in the specification, as filed, at least in paragraphs [0036 - 0049] and FIG. 4.

Applicants respectfully submit that *Shih, Han, and/or Crevasse*, taken alone or in combination, does not disclose or suggest the cleaning steps in amended independent claim 1, in the manner claimed, that require the structure to be exposed to an alkaline dip in a specific sequence. Specifically, the alkaline dip follows a weak acid dip/DI rinse, which is itself performed after a strong acid dip/DI rinse, as reflected in the current amended claim language of amended claim 1.

For the above reasons and others, it is respectfully submitted that amended independent claim 1 is novel, nonobvious, and patentable over the cited art(s), taken alone or in combination. The allowance of amended claim 1 is respectfully solicited.

Dependent claim 2 is canceled since the features have been incorporated into amended independent claim 1.

Dependent claims 7, 15, 21, 26-30, 38-40, 44, 46, 50 and 54 are currently amended for proper dependency to the parent claim since claim 2 is canceled.

Dependent claims 4, 6-7, 15-21, 23-33, 38-39, 44, and 46-54 depend from independent claim 1 and require additional elements or features not taught or suggested by the cited arts, taken alone or in combination. Since independent claim 1 should now be deemed allowable, Applicants submit that the rejection of dependent claims 4, 6-7, 15-21, 23-33, 38-39, 44, and 46-54 under 35 USC § 103(a) be withdrawn.

No new subject matter has been added.

Claim 8:

The Office Action argues that claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Shih, Han, and Crevasse* as applied to claim 2 above, and further in view of *Suzuki* for various reason(s).

Dependent claim 8 is amended for proper dependency to the parent claim since claim 2 is canceled.

Amended dependent claim 8, which depends from amended independent claim 1, and requires additional elements or features not taught or suggested by the cited arts, taken alone or in combination. Since amended independent claim 1 should now

be allowable, Applicants submit that the rejection of dependent claim 8 under 35 USC § 103(a) be withdrawn.

No new subject matter has been added.

Claims 40-43:

The Office Action argues that claims 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Shih, Han, and Crevasse* as applied to claim 2 above, and further in view of *Amai* for various reason(s).

Dependent claim 40 is amended for proper dependency to the parent claim since claim 2 is canceled.

Dependent claims 41-43 depend from amended dependent claim 40, which depends from independent claim 1, and require additional elements or features not taught or suggested by the cited arts, taken alone or in combination. Since independent claims 1 should now be allowable, Applicants submit that the rejection of dependent claims 40-43 under 35 USC § 103(a) be withdrawn. No new subject matter has been added.

CONCLUSION

In view of the discussion herein, Applicants believe that all pending claims are allowable and respectfully request a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application the undersigned can be reached at the telephone number set out below.

Applicant(s) petition for a (1) One-Month(s) extension of time. A credit card payment in the amount of \$130.00 is being submitted herewith. However, the Commissioner is authorized to charge any fees beyond the amount enclosed which may be required, or to credit any overpayment, to Deposit Account No. 50-2284 (Order No. LMRX-P023/P1130).

Respectfully submitted,

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